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Owner's Manual

SmartPro® NET SmartPro® XL

450-1400 VA

Line-Interactive UPS Systems (120V)

ESPAÑOL: p. 7

FRANÇAIS: p. 14

Safety:

p. 2

Quick Installation:

p. 3

Basic Operation:

p. 4 - 5

Storage & Service:

p. 6

Specifications:

p. 6



This manual contains important instructions and warnings that should be followed during the installation, operation and storage of all Tripp Lite UPS Systems.

UPS Location Warnings

- Install your UPS indoors, away from excess moisture or heat, dust or direct sunlight.
- For best performance, keep the indoor temperature between 32° F and 104° F (between 0° C and 40° C).
- Leave adequate space around all sides of the UPS for proper ventilation.

UPS Connection Warnings

- Connect your UPS to a three-wire, grounded AC power outlet. Do not remove or modify the ground pin of the UPS's plug. Do not use two-prong adapters with the UPS's plug.
- Do not plug your UPS into itself; this will damage the UPS and void your warranty.
- If you are connecting your UPS to a motor-powered AC generator, the generator must provide clean, filtered computer-grade output.

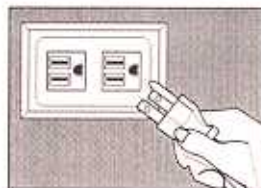
Equipment Connection Warnings

- Do not use Tripp Lite UPS Systems for life support applications in which a malfunction or failure of a Tripp Lite UPS System could cause failure or significantly alter the performance of a life-support device.
- Do not connect surge suppressors to the output of your UPS. This may damage your UPS and will void both the surge suppressor and UPS warranties.

Battery Warnings

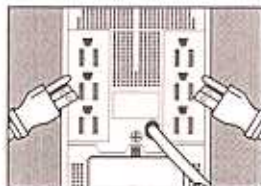
- Your UPS does not require routine maintenance. Do not open your UPS for any reason. There are no user-serviceable parts inside.
- Battery replacement must be performed by qualified service personnel. Because the batteries present a risk of electrical shock and burn from high short-circuit current, observe proper precautions. Unplug and turn off the UPS before performing battery replacement. Use tools with insulated handles and replace the existing batteries with the same number and type of new batteries (Sealed Lead-Acid). Do not open the batteries. Do not short or bridge the battery terminals with any object.
- The UPS batteries are recyclable. Refer to local codes for disposal requirements, or in the USA only call 1-800-SAV-LEAD for recycling information. Do not dispose of the batteries in a fire.
- Only connect the appropriate Tripp Lite battery pack to UPS models with external battery connectors. Do not attempt to add external batteries to UPS models without external battery connectors.

1 Plug your UPS into an electrical outlet.



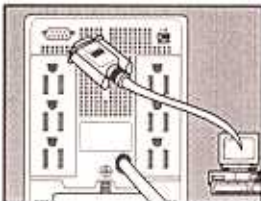
2 Plug your equipment into your UPS.

Your UPS is designed to support only computer equipment. You will overload your UPS if you connect household appliances, laser printers or surge suppressors.



-Optional*-

Using Tripp Lite cable, connect the serial port of your computer to the serial port of your UPS. Load software and run installation program appropriate to your operating system.



*DB9 port connection is optional. Your UPS will function properly without this connection.

3 Set your UPS's "OFF - ON" Switch.*

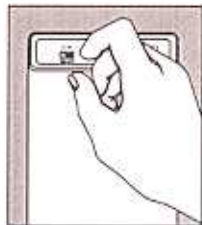
USA, Canada & Western Europe

- Set it and leave it "ON" at all times.

All Other Countries

- Set to "OFF" when you are not using connected equipment.
(WARNING! When set to "OFF," UPS will not provide battery backup during a blackout or brownout.)
- Set to "ON" when you are using connected equipment.

*See Basic Operation section for the Switch Function, UPS Conditions and Setting Advantages.



Basic Operation

Switches



With your UPS plugged in, set this switch according to the recommendations in Step 3 of the Quick Installation section.

"ON" Position: Function: ENABLES battery backup. **UPS Conditions:** The UPS battery is charging. Power is ON at the UPS receptacles. The "✓" indicator light is illuminated.

"OFF" Position: Function: DISABLES battery backup. **UPS Conditions:** The UPS battery is charging. Power is ON at the UPS receptacles. The "✓" indicator light is illuminated. The "⚡" indicator light is flashing.

Use this momentary switch to do two things:

Silence the blackout alarm

Engage this switch and release it. Note: when the battery is nearly depleted, the alarm resumes (and cannot be silenced) to alert you to immediately shut down connected equipment.

Test your UPS's battery charge

Leave your connected equipment ON. With your UPS plugged in and completely turned ON, engage this switch; hold it there for 5 seconds and release it. The UPS will momentarily switch to battery to test its charge. The "✓" light will turn ON and the alarm may sound if your UPS fails a self-test and/or the UPS battery is less than fully charged. Let the UPS charge for 12 hours and perform a second self-test. If the light continues to stay on, contact Tripp Lite for service. **CAUTION:** Do not unplug your UPS to test its batteries. This will remove safe electrical grounding and may introduce a damaging surge into your network connections.

Indicator Lights

All Indicator Light descriptions apply when the UPS is plugged into a wall outlet and turned ON.



This green light will shine *constantly* to indicate AC power is available at the receptacles. It will *flash* to indicate AC power is *not* available. (See "On/Standby Switch" descriptions above.)



This multicolored light displays 7 separate UPS battery charge conditions. It will turn from red (low) to yellow (medium) to green (full) to show you the level of battery charge. If the light is constant, your UPS is operating from line power, and the battery is charging. If the light is flashing, your UPS is operating from battery power, and the battery is discharging. If this light is flashing red, your UPS is nearly out of power, and you should save your files and shut down your equipment immediately.



Whenever your UPS is automatically correcting high or low AC line voltage, this green light will turn ON and the UPS clicks gently. These are both normal, automatic operations of your UPS, and no action is required on your part.



This red light will turn on if your UPS's self-test (initiated with the Mute/Test Switch) reveals a low battery charge or internal fault. If this light turns on, let the UPS charge for 12 hours then perform a second self-test. If the light stays on, contact Tripp Lite for service.



This multicolored light shows how heavy your UPS's load is. Steady green indicates a light load, steady yellow a medium load. When the light is red, your UPS is supporting a load above 85% of its capacity. If the red light begins flashing, then your UPS is severely overloaded. Immediately remove load from the UPS until the light stops flashing.

Other UPS Features

AC Receptacles



The receptacles provide your connected equipment with AC line power during normal operation and battery power during blackouts and brownouts. They also protect your equipment against damaging surges and line noise. You can remotely reboot connected equipment by turning all of the receptacles OFF and ON at once using Tripp Lite UPS software. Select models, however, feature a unique "Remote Reboot Outlet" (identified on the back panel of your UPS) which allows you to use Tripp Lite UPS software to remotely reboot equipment connected to this outlet without interrupting power to equipment connected to the other outlets. See software instructions for details.

Note: constant power is available at the Remote Reboot Outlet (and all other outlets) unless controlled through included UPS software.

"SMART" RS-232 Port



The RS-232 port connects your UPS to any workstation or server. Use with Tripp Lite software and cabling to monitor and manage network power and automatically save open files and shut down equipment during a blackout. This port uses RS-232 communications to transmit UPS and power conditions. Select models feature plug-and-play capability. Contact Tripp Lite Customer Support for more information and a list of available SNMP, network management and connectivity products.

Contact Closure Port(s) (Select Models Only)



Also used to connect your UPS to any workstation or server. Use with Tripp Lite software and cabling to automatically save open files and shut down equipment during a blackout. This port uses contact-closure signals to indicate line-fail and low-battery status. Contact Tripp Lite Customer Support for more information.

External Battery Connector (Select Models Only)



Use to connect additional Tripp Lite battery packs for additional runtime. Refer to the label next to the connector for the appropriate Tripp Lite battery pack to connect. Refer to instructions available with the battery pack for complete connection information and safety warnings.

Battery Replacement Door



Under normal conditions, the original battery in your UPS will last several years. Battery replacement should be performed only by qualified service personnel. Refer to "Battery Warnings" in the Safety section on page 2.

Storage & Service

Storage

Turn your UPS OFF; first engage the ON/Standby Switch and release it to place your UPS in the "Standby" mode, then disconnect the UPS power cord from the wall outlet. If you plan on storing your UPS for an extended period of time, recharge the UPS batteries once every three months. Follow steps #1 and #3 in the Quick Installation section and allow the UPS to charge from 4 to 6 hours. If you leave your UPS batteries discharged for an extended period of time, they will suffer permanent loss of capacity.

Service

If returning your UPS to Tripp Lite, please carefully pack the UPS using the ORIGINAL PACKING MATERIAL that came with the unit. Enclose a letter describing the symptoms of the problem. If the UPS is within the 2 year warranty period, enclose a copy of your sales receipt.

Specifications

	Smart 450 NET	Smart 700 NET	Smart 850 NET
Output Capacity (VA/Watts):	450/280	700/450	850/570
Battery Runtime (Half Load/ Full Load) Minutes:	19/5	20/5	27/10
Battery Recharge Time:	2-4 hrs.	2-4 hrs.	2-4 hrs.
Approvals:	UL, cUL, NOM	UL, cUL, NOM	UL, cUL, NOM
	Smart 1050 NET	Smart 1400 NET	Smart 700 XL NET
Output Capacity (VA/Watts):	1050/675	1400/940	700/425
Battery Runtime (Half Load/ Full Load) Minutes:	23/8	25/10	79/25
Battery Recharge Time:	2-4 hrs.	2-4 hrs.	2-4 hrs.
Approvals:	UL, cUL, NOM	UL, cUL, NOM	UL, cUL, NOM
	Smart 1050 XL NET	Smart 1400 XL NET	
Output Capacity (VA/Watts):	1050/680	1400/940	
Battery Runtime (Half Load/ Full Load) Minutes:	46/16	25+/10+*	
Battery Recharge Time:	2-4 hrs.	1-2 hrs.	
Approvals:	UL, cUL, NOM	UL, cUL, NOM	

*Runtime can be extended with the connection of the appropriate Tripp Lite external battery packs.

Input Voltage/Frequency (120V/60 Hz); On-Line Input Voltage Range (79-143Vrms); Voltage-Regulated Output Voltage Range (120V \pm 9%); On-Battery Output Voltage Range (120V \pm 5%); Output Waveform/Line Mode (filtered sine wave); Output Waveform/Battery Mode (PWM sine wave); AC Surge Suppression (exceeds IEEE 587 Cat. A & B standards); AC Noise Attenuation (>40 dB); AC Protection Modes (H to N, N to G, N to G).



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